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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,187	09/21/2005	Tadayuki Kameyama	043168	1489

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EXAMINER	
MERLIN, JESSICA M	

ART UNIT	PAPER NUMBER
2871	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/522,187	KAMEYAMA ET AL.	
	Examiner	Art Unit	
	JESSICA M. MERLIN	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 16, 2008 has been entered.

Response to Amendment

2. Receipt is acknowledged of applicant's amendment filed July 16, 2008. Claims 1-26 are pending and an action on the merits is as follows.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 6, 7, 9, 10, 14, 15, 17, 20, 21, 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iba et al. (JP 10-268294A) in view of Kuwabara et al. (U.S. 5,875,014).

In regard to claims 1 and 26, Iba et al. discloses a polarizer containing a dichroic material in a matrix *(see e.g. paragraph [0029])*, wherein an in-plane retardation at a

measurement wavelength providing no absorption is in a range of 950 to 1350 nm *(see e.g. Table 2 where calculation of the retardation, Δn*d yields values in the above range i.e. for a thickness of 60μm and Δn=0.02, retardation = 1.2 μm= 1200 nm)*, but fails to disclose the thickness of the polarizer is 5 to 40 μm and the thickness of the polarizer is 15 to 35 μm.

However, Kuwabara et al. discloses an anisotropic film with an in-plane retardation of 50 to 1000 nm and a thickness of 20 to 50 μm which overlaps the claimed ranges *(see e.g. Column 9, lines 55-58 and Column 10, lines 49-54).*

5. Given the teachings of Kuwabara et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display device of Iba et al., with the thickness of the polarizer is 5 to 40 μm and the thickness of the polarizer is 15 to 35 μm.

Doing so would provide a film that has the advantage of having a high wavelength dispersion which in combination with an STN LCD, results in the compensation of the wavelength dispersion of the liquid crystal material, thereby preventing unwanted coloring of the light.

In regard to claim 6, Iba et al. discloses the matrix is a polymer film *(see e.g. paragraph [0014] of the English translation).*

In regard to claim 7, Iba et al. discloses the polymer film is a polyvinyl alcohol film *(see e.g. paragraph [0014] of the English translation).*

In regard to claim 9, Iba et al. discloses an optical film comprising the polarizer according to claim 1 *(see e.g. paragraph [0012] and Figure 1 of the English translation).*

In regard to claim 10, Iba et al. discloses the optical film according to claim 9, which further comprises a transparent protective layer **3a,3b**, and the transparent protective layer **3a,3b** is arranged on at least one surface of the polarizer **1** *(see e.g. paragraph [0012] and Figure 1 of the English translation).*

In regard to claim 14, Iba et al. discloses a liquid crystal panel comprising at least either the polarizer according to claim 1, wherein the polarizer **1** is arranged on at least one surface of a liquid crystal cell *(see e.g. Figure 2 and paragraph [0020] of the English translation).*

In regard to claim 15, Iba et al. discloses a liquid crystal display comprising the liquid crystal panel according to claim 14 *(see e.g. Figure 2 and paragraph [0020] of the English translation).*

In regard to claim 17, Iba et al. discloses an image display device comprising at least the polarizer **1** according to claim 1 *(see e.g. Figure 2 and paragraph [0020] of the English translation).*

In regard to claim 20, Iba et al. discloses a liquid crystal panel comprising at least the optical film according to claim 9, wherein the optical film is arranged on at least one surface of a liquid crystal cell *(see e.g. Figure 2 and paragraph [0020] of the English translation).*

In regard to claim 21, Iba et al. discloses a liquid crystal display comprising the liquid crystal panel according to claim 20 *(see e.g. Figure 2 and paragraph [0020] of the English translation).*

In regard to claim 23, Iba et al. discloses an image display device comprising at least the optical film according to claim 9 *(see e.g. Figure 2 and paragraph [0020] of the English translation).*

6. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iba et al. (JP 10-268294A) in view of Kuwabara et al. (U.S. 5,875,014) and further in view of Harita et al. (U.S. 2001/0039319 A1).

In regard to claim 2, Iba et al., in view of Kuwabara et al., discloses all of the claimed limitations from above, but fails to disclose a differential retardation fluctuation (σ) at the measurement wavelength providing no absorption is in a range of-5 nm/mm to 5 nm/mm.

However, Harita et al. teaches a differential retardation fluctuation (σ) at the measurement wavelength providing no absorption is in a range of-5 nm/mm to 5 nm/mm *(see e.g. abstract and paragraph [0024]).*

7. Given the teachings of Harita et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al., in view of Kuwabara et al., with a differential retardation fluctuation (σ) at the measurement wavelength providing no absorption is in a range of-5 nm/mm to 5 nm/mm.

Doing so would provide a reduction in color irregularities due to fluctuations in film quality that results in an improved display quality.

In regard to claim 3, Iba et al., in view of Kuwabara et al., discloses all of the claimed limitations from above, but fails to disclose the measurement wavelength providing no absorption, a distance between a measurement position providing a maximum value of the in-

plane retardation and a measurement position providing a minimum value of the in-plane retardation is in a range not more than 10 mm or not less than 100 mm, and a difference between the maximum value and the minimum value (in-plane retardation variation) is less than 60 μm.

However, Harita et al. teaches the measurement wavelength providing no absorption, a distance between a measurement position providing a maximum value of the in-plane retardation and a measurement position providing a minimum value of the in-plane retardation is in a range not more than 10 mm or not less than 100 mm, and a difference between the maximum value and the minimum value (in-plane retardation variation) is less than 60 μm *(see e.g. paragraph [0024]).*

8. Given the teachings of Harita et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al., in view of Kuwabara et al., with a measurement position providing a maximum value of the in-plane retardation and a measurement position providing a minimum value of the in-plane retardation is in a range not more than 10 mm or not less than 100 mm, and a difference between the maximum value and the minimum value (in-plane retardation variation) is less than 60 μm.

Doing so would provide a means for measuring the quality of the optical film, so as to assure there is reduction in color irregularities due to fluctuations in film quality that results in an improved display quality.

9. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iba et al. (JP 10-268294A) in view of Kuwabara et al. (U.S. 5,875,014) and further in view of Sugino et al. (JP 2002333522).

In regard to claim 4, Iba et al., in view of Kuwabara et al., discloses all of the claimed limitations from above, but fails to disclose the measurement wavelength is in a range of 800 to 1500 nm.

However, Sugino et al. teaches disclose the measurement wavelength is in a range of 800 to 1500 nm *(see e.g. abstract, where a wavelength of 900nm is used).*

10. Given the teachings of Sugino et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al., in view of Kuwabara et al., with the measurement wavelength is in a range of 800 to 1500 nm.

Doing so would provide a measure of the quality of the retardation of the polarizing film at a wavelength that is in the IR.

In regard to claim 5, Iba et al., in view of Kuwabara et al., discloses all of the claimed limitations from above, but fails to disclose the measurement wavelength is 1000 nm.

However, Sugino et al. teaches the measurement wavelength is 900 nm *(see e.g. abstract, where a wavelength of 900 nm is used, which is close to the claimed value of 1000nm).*

11. Given the teachings of Sugino et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al., in view of Kuwabara et al., with the measurement wavelength is 1000 nm.

Doing so would provide a measure of the quality of the retardation of the polarizing film at a wavelength that is in the IR.

12. Claims 8, 16, 19, 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iba et al. (JP 10-268294A) in view of Kuwabara et al. (U.S. 5,875,014) and further in view of Honda et al. (U.S. 2001/0033349 A1)

In regard to claim 8, Iba et al., in view of Kuwabara et al., discloses all of the claimed limitations from above, but fails to disclose the polarizer according to claim 1, which is chip-cut.

However, Honda et al. teaches the polarizer according to claim 1, which is chip-cut *(see e.g. [0053]).*

13. Given the teachings of Honda et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al., in view of Kuwabara et al., with the polarizer is chip-cut.

Doing so would provide a polarizer, which is cut to size for use in a display material from the stretched bulk material using a well-known technique.

In regard to claim 16, Iba et al., in view of Kuwabara et al., discloses all of the claimed limitations from above, but fails to disclose the liquid crystal display according to claim 15, which has a flat light source for emitting polarized light.

However, Honda et al. teaches a flat light source for emitting polarized light *(see e.g. paragraph [0038]).*

14. Given the teachings of Honda et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al., in view of Kuwabara et al., with a flat light source for emitting polarized light.

Doing so would provide a means of lighting the liquid crystal display apparatus using, which enhances the luminance of the display device.

In regard to claim 19, Iba et al., in view of Kuwabara et al., discloses all of the claimed limitations from above, but fails to disclose an in-house production method for producing the image display device according to claim 17, which comprises a process of chip-cutting at least a polarizer according containing a dichroic material in a matrix and immediately bonding to the display device.

However, Honda et al. teaches chip-cutting at least a polarizer according containing a dichroic material in a matrix *(see e.g. paragraph [0053] of the English translation)* and immediately bonding to the display device *(see e.g. paragraph [0037] of the English translation).*

15. Given the teachings of Honda et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al., in view of Kuwabara et al., with an in-house production method for producing an image display device comprising comprises a process of chip-cutting at least a polarizer according containing a dichroic material in a matrix and immediately bonding to the display device.

Doing so would provide a means of manufacturing a liquid crystal display device having an increased luminance and polarizer film quality.

In regard to claim 22, Iba et al., in view of Kuwabara et al., discloses all of the claimed limitations from above, but fails to disclose the liquid crystal display according to claim 21, which has a flat light source for emitting polarized light.

However, Honda et al. teaches a flat light source for emitting polarized light *(see e.g. paragraph [0038]).*

16. Given the teachings of Honda et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al., in view of Kuwabara et al., with a flat light source for emitting polarized light.

Doing so would provide a means of lighting the liquid crystal display apparatus using, which enhances the luminance of the display device.

In regard to claim 25, Iba et al., in view of Kuwabara et al., discloses all of the claimed limitations from above, but fails to disclose an in-house production method for producing the image display device according to claim 17, which comprises a process of chip-cutting at least an optical film comprising a polarizer, the polarizer containing a dichroic material in a matrix and immediately bonding to the display device.

However, Honda et al. teaches chip-cutting at least a polarizer according containing a dichroic material in a matrix *(see e.g. paragraph [0053] of the English translation)* and immediately bonding to the display device *(see e.g. paragraph [0037] of the English translation).*

17. Given the teachings of Honda et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al., in view of Kuwabara et al., with an in-house production method for producing an image display device comprising comprises a process of chip-cutting at least a polarizer according containing a dichroic material in a matrix and immediately bonding to the display device.

Doing so would provide a means of manufacturing a liquid crystal display device having an increased luminance and polarizer film quality.

18. Claims 11-13, 18 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iba et al. (JP 10-268294A) in view of Kuwabara et al. (U.S. 5,875,014) and further in view of Yoshimi et al. (JP 2001311826).

In regard to claim 11, Iba et al., in view of Kuwabara et al., discloses all of the claimed limitations from above, but fails to disclose a pressure-sensitive adhesive layer is arranged on at least one outermost surface layer.

However, Yoshimi et al. teaches a pressure-sensitive adhesive layer is arranged on at least one outermost surface layer *(see e.g. abstract and paragraph [0037] of the English translation).*

19. Given the teachings of Yoshimi et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al., in view of Kuwabara et al., with a pressure-sensitive adhesive layer is arranged on at least one outermost surface layer.

Doing so would provide a commonly used means for attaching the polarizer to other layers of a display device.

In regard to claim 12, Iba et al., in view of Kuwabara et al., discloses all of the claimed limitations from above, but fails to disclose the optical film according to claim 9, which further comprises at least either a polarization converter or a retardation film.

However, Yoshimi et al. teaches the optical film according to claim 9, which further comprises at least either a polarization converter or a retardation film 9 *(see e.g. abstract and paragraph [0007] of the English translation).*

20. Given the teachings of Yoshimi et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al., in view of Kuwabara et

al., with the optical film further comprises at least either a polarization converter or a retardation film.

Doing so would provide an optical film that can compensate a liquid crystal display device, which improves the quality and viewing angle of the display.

In regard to claim 13, Iba et al., in view of Kuwabara et al., discloses all of the claimed limitations from above, but fails to disclose the polarization converter is either an anisotropic reflective polarizer or an anisotropic light-scattering polarizer.

However, Yoshimi et al. teaches the polarization converter is either an anisotropic reflective polarizer or an anisotropic light-scattering polarizer *(see e.g. abstract and paragraph [0007] of the English translation).*

21. Given the teachings of Yoshimi et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al., in view of Kuwabara et al., with the polarization converter is either an anisotropic reflective polarizer or an anisotropic light-scattering polarizer.

Doing so would provide an optical film that can compensate a liquid crystal display device, which improves the quality and viewing angle of the display

In regard to claim 18, Iba et al., in view of Kuwabara et al., discloses all of the claimed limitations from above, but fails to disclose the image display device according to claim 17, which is an electroluminescent display.

However, Yoshimi et al. teaches the image display device according to claim 17, which is an electroluminescent display *(see e.g. paragraph [0013] of the English translation).*

22. Given the teachings of Yoshimi et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al., in view of Kuwabara et al., with an image display device using the polarizer is an electroluminescent display.

Doing so would provide a display that has increased luminance and viewing quality.

In regard to claim 24, Iba et al., in view of Kuwabara et al., discloses all of the claimed limitations from above, but fails to disclose the image display device according to claim 23, which is an electroluminescent display.

However, Yoshimi et al. teaches the image display device according to claim 23, which is an electroluminescent display *(see e.g. paragraph [0013] of the English translation)*.

23. Given the teachings of Yoshimi et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the polarizer of Iba et al., in view of Kuwabara et al., with an image display device using the polarizer is an electroluminescent display.

Doing so would provide a display that has increased luminance and viewing quality.

Response to Arguments

24. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

25. In regard to independent claim 1, applicant's arguments, on pages 7-8 of the Remarks submitted July 16, 2008, that the previously cited rejection of Iba et al. fails to disclose the newly added limitation, "wherein the thickness of the polarizer is 5 to 40 μm," is appreciated. However, the newly cited rejection, necessitated by amendment, discloses the limitations of claim 1, as cited above. Specifically, Kuwabara et al. discloses an anisotropic film with an in-

plane retardation of 50 to 1000 nm and a thickness of 20 to 50 μm which overlaps the claimed ranges. The motivation for the combination of Iba et al. with Kuwabara et al., is to provide a film that has the advantage of having a high wavelength dispersion which in combination with an STN LCD, results in the compensation of the wavelength dispersion of the liquid crystal material, thereby preventing unwanted coloring of the light.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA M. MERLIN whose telephone number is (571)270-3207. The examiner can normally be reached on Monday-Friday 6:30AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. M. M./
Examiner, Art Unit 2871
Jessica M. Merlin
September 25, 2008

/David Nelms/
Supervisory Patent Examiner, Art Unit 2871